

ART 34 AMDT

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January 2004

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CLAIMS

- 1) A process for production of a wort, comprising;
 - a) forming a mash comprising between 5% and 100% barley malt (w/w of the grist);
 - b) prior to, during or after a) adding a cellulase (E.C. 3.2.1.4);
 - c) attaining within 15 minutes of a) an initial incubation temperature of at least 70°C;
 - d) following c) incubating the mash at a temperature of at least 70°C for a period of time sufficient to achieve an extract recovery of at least 80%; and,
 - e) separating the wort from the spent grains.
- 2) The process according to claim 1, wherein further a protease (E.C. 3.4.) is added.
- 3) The process according to any of the proceeding claims, wherein further an alpha-amylase (E.C. 3.2.1.1) is added.
- 4) The process according to any of the proceeding claims, wherein further a maltose generating enzyme is added.
- 5) A process for production of a beer, comprising obtaining the wort of the process of any of claims 1-4, fermenting said wort with a yeast, and obtaining a beer.
- 6) A process for production of a beer, comprising obtaining the wort of the process of any of claims 1-4, combining said wort with a second wort, fermenting the combined wort with a yeast, and obtaining a beer.
- 7) A process for production of a beer, comprising obtaining the wort of the process of any of claims 1-4, fermenting said wort with a yeast, combining the fermented wort with a fermented second wort, and obtaining a beer.
- 8) The process according to any of the proceeding claims, wherein at least 10%, or more preferably at least 15%, even more preferably at least 25%, or most preferably at least 35%, such as at least 50%, at least 75%, at least 90% or even 100% (w/w) of the grist of the wort defined in claim 1 is barley malt.
- 9) The process of any of claims 5-8, wherein the beer is ales, strong ales, bitters, stouts, porters, lagers, export beers, malt liquors, barley wine, happoushu, high-alcohol beer;

low-alcohol beer, low-calorie beer or light beer.

- 10) The process of any of the proceeding claims, wherein the concentration of dimethyl sulfide in the wort or the beer is reduced, such as by 1%, at least 10%, at least 20%, at least 30%, at least 40%, at least 50%, or at least 60% relative to the level in a wort or a beer produced by the standard Congress mashing process.
- 11) The process of any of the proceeding claims, wherein the concentration of trans-2-nonenal of the wort or the beer is reduced, such as by at least 1%, at least 10%, at least 20%, at least 30%, at least 40%, at least 50%, or at least 60% relative to the level in a wort or a beer produced by the standard Congress mashing process.
- 12) The process according to any of claims 4-11; wherein the maltose generating enzyme is a beta-amylase (E.C. 3.2.1.2) or a maltogenic alpha-amylase (E.C. 3.2.1.133).
- 13) The wort produced by the process of any of claims 1-12.
- 14) The beer produced by the process of any of claims 5-12.

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